

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-25 (Canceled)

26. (NEW) A modulator of the GPR91 receptor comprising an antibody.
27. (NEW) An antibody that modulates the activity of GPR91 and specifically binds to:
  - a. SEQ ID No 2,
  - b. a polypeptide having at least 70% amino acid identity to SEQ ID NO 2;  
or
  - c. a fragment of the polypeptide of (b) comprising at least 12 amino acids and an epitope.
28. (NEW) The antibody of claim 27, wherein the antibody is an agonist of GPR91.
29. (NEW) The antibody of claim 27, wherein the antibody is an antagonist of GPR91.
30. (NEW) The antibody of claim 27, wherein the antibody is polyclonal, monoclonal, humanized, human, bispecific, or a heteroconjugate.
31. (NEW) A composition comprising the antibody of claim 27 and one or more pharmaceutically acceptable adjuvants, carriers, excipients, and diluents.
32. (NEW) A modulator of the GPR91 receptor comprising SEQ ID No: 2 or a fragment comprising at least 12 amino acids thereof capable of disrupting the binding of GPR91 and its ligand.
33. (NEW) The modulator of claim 32, wherein the modulator is an agonist of GPR91.
34. (NEW) The modulator of claim 32, wherein the antibody is an antagonist of GPR91.

35. (NEW) A composition comprising the peptide of claim 32 and one or more pharmaceutically acceptable adjuvants, carriers, excipients, and diluents.
36. (NEW) A modulator of the GPR91 receptor comprising an SiRNA capable of modulating the expression of GPR91.
37. (NEW) The modulator of claim 36, wherein the modulator is an agonist of GPR91.
38. (NEW) The modulator of claim 36, wherein the modulator is an antagonist of GPR91.
39. (NEW) A method for treating a mast cell mediated disease comprising administering a GPR91 receptor modulator sufficient to treat a mast cell mediated disease.
40. (NEW) The method according to claim 39, wherein the GPR91 receptor modulator is a GPR91 agonist.
41. (NEW) The method according to claim 39, wherein the GPR91 receptor modulator is a GPR91 antagonist.
42. (NEW) The method according to claim 39, wherein the mast cell mediated disease is allergic asthma.
43. (NEW) The method according to claim 39, wherein the modulator is an antibody, a peptide or an SiRNA.
44. (NEW) The method according to claim 43, wherein the antibody further comprises an effector function for killing mast cells.
45. (NEW) The method according to claim 44, wherein the effector function is antibody-dependent cell-mediated cytotoxicity (ADCC).
46. (NEW) The method according to claim 43, wherein the antibody is conjugated to an apoptosis-inducing moiety for inducing apoptosis in mast cells.
47. (NEW) The method according to claim 46, wherein the apoptosis-inducing moiety is a pro-apoptotic member of the Bcl-2 family selected from Bax- $\alpha$ , Bak, Bcl-X<sub>s</sub>, Bad, Bid, Bik, Erk, and Bok.
48. (NEW) A method of screening for a compound that modulates of GPR91 receptor activity comprising:

- a. preparing a transfected cell comprising a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO 2;
  - b. contacting transfected cell(s) with at least one compound whose ability to modulate the GPR91 receptor activity is sought to be determined;
  - c. monitoring said cell for a compound that modulates the receptor's activity.
49. (NEW) The method according to claim 48, wherein the cell is stably transfected.
50. (NEW) The method according to claim 48, wherein the cell is transiently transfected.
51. (NEW) The method according to claim 49, wherein the cell is a mast cell.
52. (NEW) The method according to claim 48, wherein the compound is an agonist.
53. (NEW) The method according to claim 48, wherein the compound is an antagonist.
54. (NEW) The method according to claim 48, wherein the compound is an antibody.
55. (NEW) The method according to claim 48, wherein the amount of calcium influx is monitored.
56. (NEW) The method according to claim 48, wherein the cells employed in step (a) further comprise a DNA encoding a reporter protein wherein said DNA is operatively linked to a GPR91 responsive transcription element.
57. (NEW) The method according to claim 48, wherein step (b) is carried out in the presence of increasing concentrations of at least one compound whose ability to inhibit signal transduction activity of said receptor protein(s) is sought to be determined.
58. (NEW) The method according to claim 56, wherein step (c) comprises monitoring in said cells the level of expression of the reporter protein as a function of the concentration of the compound, thereby indicating the ability of said compound to inhibit signal transduction activity.

59. (NEW) The method according to claim 56, wherein said GPR91 responsive transcription element is a cAMP responsive transcription element.
60. (NEW) A method of screening for agonists or antagonists of GPR91 activity comprising: (a) contacting cells which express a GPR91 receptor with a candidate compound, (b) assaying a cellular response, and (c) comparing the cellular response to a standard cellular response made in absence of the candidate compound; whereby, an increased cellular response over the standard indicates that the compound is an agonist and a decreased cellular response over the standard indicates that the compound is an antagonist.
61. (NEW) A compound identified by the method of claim 48 or claim 60.
62. (NEW) A method of diagnosing a mast cell mediated disorder in a mammal comprising:
  - a. Obtaining a sample from a mammal suspected of having a mast cell mediated disorder;
  - b. Incubating said sample with a detectable amount of anti-GPR91 antibody;
  - c. Measuring the amount of bound antibody;
  - d. Comparing the amount of bound antibody in the suspected sample as compared to a normal control.
63. (NEW) A kit comprising an anti-GPR91 antibody.